

#### JFMF Master Teacher Program

## Forum:

Topic: Callisburg Water Quality Study in Elm Fork of Trinity River Subject: Callisburg Water Quality Study in Elm Fork of Trinity River Posted by: Callisburg HS Posted on: 2006/12/20 21:38:57

Callisburg students studied the Elm Fork of the Trinity River. This is the second year we have conducted this study and the results were similar. We had speculated there might be a dramatic shift in the results because we were experiencing a significant drought and the river was not running as it had been last year. We had to collect our samples from pools of standing water in the river. We held off on our testing because we were hoping for a rain and therefore running water, but we could wait no longer if we were to have results to report at our confernece.

The Elm Fork of the Trinity River is vital to Texas population and economy. The river has its headwaters at Saint Jo which is near Gainesville and the Oklahoma border and then travels the entire legnth of Texas to empty into the Gulf of Mexico near Galveston. Along the way the river provides drinking water to the cities of Dallas and Fort Worth as well as numerous smaller cities along its course. It also provides water for agriculture and industry. A decade ago the river was considered the most toxic river in Texas but it has regained much of its former quality due to environmental policies that favor cleaning the water.

As the results of our tests will show, the current state of the river near its headwaters is excellent, even in times of drought. We hope our students will learn how valuable this resource is and what steps they can take to preserve it for future generations.

The students discovered the Trinity River is an important source of fresh water for all of its surrounding areas. From the merging of the Elm and West Forks the river flows 423 miles to the coast making it the longest river entirely within Texas. the drainage basin covers 17,969 square miles and includes all or portions of 37 Texas counties.

Originally there was a dream of making the Trinity navigable to provide for river traffic with Dallas as a possible port.

The students tested the river at three sites: I-35 bridge downstream of the zoo; adjacent to the zoo; and upstream from the zoo at McDermott Park.

Each site was tested by six teams of students and the results were tallied and an average was calculated for each site.

The students tested for Chlorine, dissolved oxygen, nitrates, phosphates, and pH. There were signs of fresh water invertebrates but they were not identified. The science teachers will focus on identification in the coming year's projects.

Because of a drought there was little or no movement of water in the river bed. Hopefully next year will yield average rainfall and results can be significantly different. However, students did discover there was little or no signs of nitrates which was significantly lower than last year's test. However, the reason is probably due to the lack of rainfall washing nitrogen fertilizers into the river from

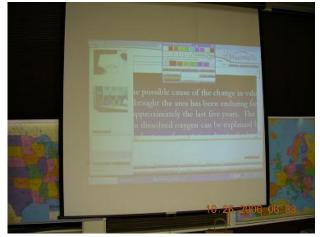
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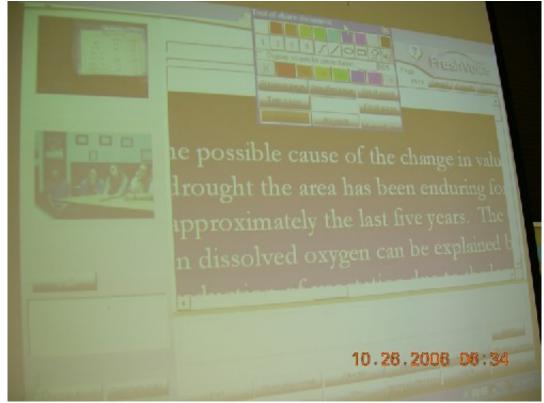


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